

Ambedkar Dukkipati

Title: On Parametric and Implicit Algebraic descriptions of Maximum Entropy models

Abstract:

Main aim of this talk is to present some notions on how results from commutative algebra and algebraic geometry could be used in representation and computation of maximum and minimum entropy (ME) models. I show that various formulations of estimation of ME models can be transformed to solving systems of polynomial equations in cases where an integer valued sufficient statistic exists. I present an implicit description of ME-models by embedding them in algebraic varieties for which I discuss a Gröbner bases method to compute it.